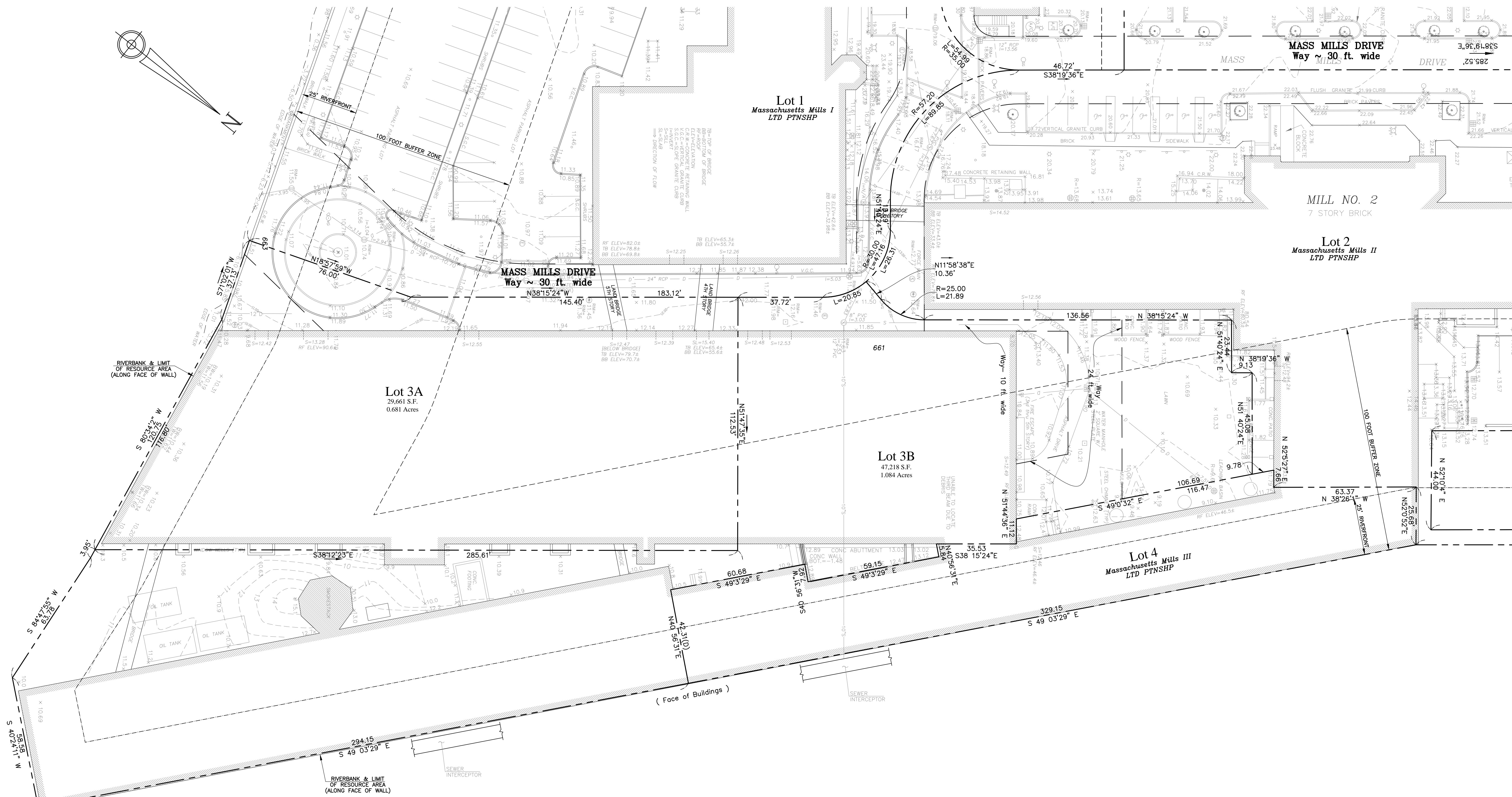


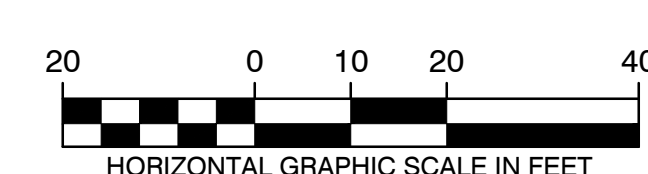
**APPENDIX Q:**

Massachusetts Mills III Drawings



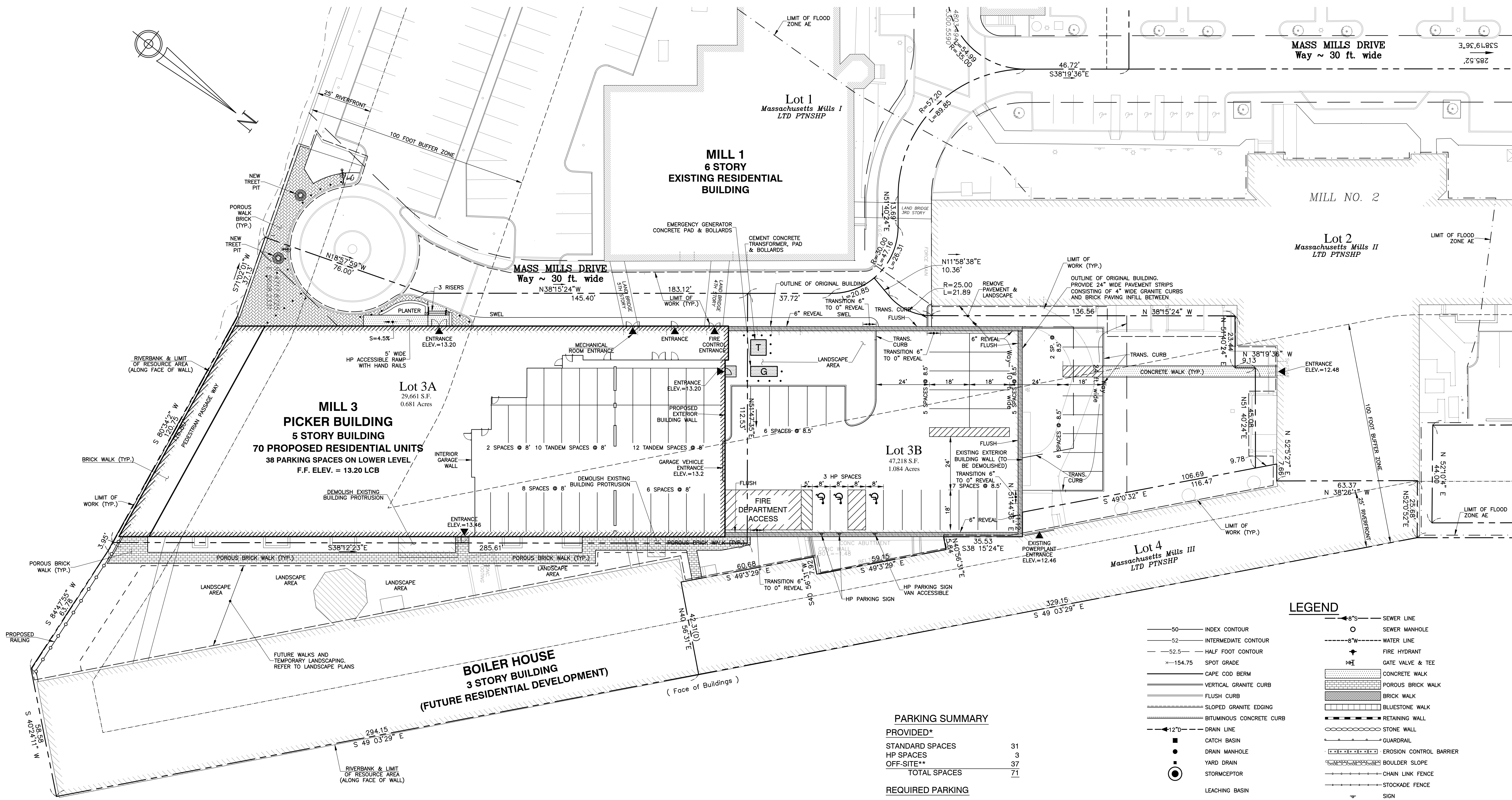
- NOTES:
- LOCATIONS AND ELEVATIONS OF UNDERGROUND PIPES AND CONDUITS HAVE BEEN DETERMINED FROM THE ABOVE REFERENCED PLAN AND SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. H.W. MOORE ASSOCIATES, INC. ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES INACURATELY SHOWN OR OMITTED. BEFORE PLANNING FUTURE CONNECTIONS, THE PROPER UTILITY DEPARTMENT SHALL BE NOTIFIED AND THE ACTUAL LOCATIONS OF SUBSURFACE STRUCTURES SHALL BE VERIFIED IN THE FIELD. CALL THE BWSO, (617)335-9400 (4590) AND DIG-SAFE CALL CENTER, (888)344-7233, 72 HOURS (3 WORKING DAYS) PRIOR TO EXCAVATION.
  - THE 100 FOOT BUFFER ZONE FROM THE RIVERBANK AND THE 25 FOOT RIVERFRONT ZONE WERE AMENDED TO THE PLAN BY H. W. MOORE ASSOCIATES, INC.
  - 100 YEAR FLOOD BOUNDARY, ZONE AE, TRACED FROM FIRM FLOOD INSURANCE MAP, PANEL 143, MAP NUMBER 25017C0143E, EFFECTIVE DATE JUNE 4, 2010.
  - 100 YEAR FLOOD ELEVATION VARIES BETWEEN 66.6 NAD 88 DATUM (11.4 LOWELL DATUM) AND 66.2 NAD 88 DATUM (11.0 LOWELL DATUM) FROM FIRM FLOOD INSURANCE RATE MAP JUNE 4, 2010.

- PLAN REFERENCES:
- EXISTING CONDITIONS INCLUDING BUILDINGS, TOPOGRAPHY AND UTILITIES TAKEN FROM A PLAN TITLED TOPOGRAPHIC PLAN, "MASS MILLS", LOWELL, MASS DATED OCTOBER 6, 2003 AND REVISED AUGUST 26, 2004 BY R. E. CAMERON & ASSOCIATES, INC. OF NORWOOD, MASSACHUSETTS.
  - PROPERTY LINE TAKEN FROM A PLAN TITLED "PLAN OF LAND, MASSACHUSETTS MILLS, 169.2 BRIDGE STREET, LOWELL, MASSACHUSETTS", PLAN PREPARED BY R. E. CAMERON & ASSOCIATES, INC. OF NORWOOD, MA AND DATED APRIL 22, 2014.



**hwmoore**  
ASSOCIATES, INC.  
CIVIL ENGINEERING & LAND PLANNING  
112 Shawmut Avenue, Boston, MA 02118-2227  
tel: 617-357-8145 fax: 617-357-9495 web: hwmoore.com

R-M Developer LLC Massachusetts Mills III - PICKER BLDG Lowell, Massachusetts	EXISTING CONDITIONS PLAN	
	Date: JULY 8, 2014	Rev:
Russell Scott Steedle & Capone Architects Inc. 18 Brattle Street Cambridge Massachusetts 02138 617-661-5880 Fax 661-0613		C-2



- PLAN REFERENCES:**
- EXISTING CONDITIONS INCLUDING BUILDINGS, TOPOGRAPHY AND UTILITIES TAKEN FROM A PLAN TITLED TOPOGRAPHIC PLAN, "MASS MILLS", LOWELL MASS DATED OCTOBER 6, 2003 AND REVISED AUGUST 26, 2004 BY R. E. CAMERON & ASSOCIATES, INC. OF NORWOOD, MASSACHUSETTS.
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**PARKING SUMMARY**

PROVIDED*	
STANDARD SPACES	31
HP SPACES	3
OFF-SITE**	37
TOTAL SPACES	71

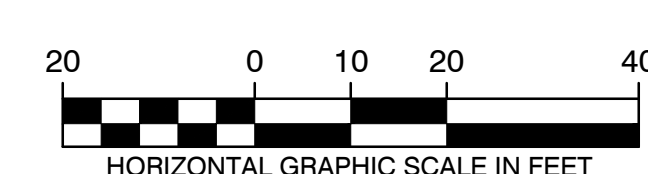
**REQUIRED PARKING**

1 SPACE / UNIT =	70
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\* THE PARKING SPACES IN THE STRUCTURE ARE NOT COUNTED IN THE SUMMARY  
\*\* OFF-SITE PARKING HAS BEEN SECURED IN THE PARKING GARAGE AT 75 JOHN STREET.

**LEGEND**

50	INDEX CONTOUR	8" S	SEWER LINE
52	INTERMEDIATE CONTOUR	O	SEWER MANHOLE
52.5	HALF FOOT CONTOUR	8" W	WATER LINE
154.75	SPOT GRADE	+	FIRE HYDRANT
	CAPE COD BERM	+	GATE VALVE & TEE
	VERTICAL GRANITE CURB		CONCRETE WALK
	FLUSH CURB		POROUS BRICK WALK
	SLOPED GRANITE EDGING		BRICK WALK
	BITUMINOUS CONCRETE CURB		BLUESTONE WALK
12" D	DRAIN LINE		RETAINING WALL
■	CATCH BASIN		STONE WALL
●	DRAIN MANHOLE		GUARDRAIL
●	STORMCEPTOR		EROSION CONTROL BARRIER
●	LEACHING BASIN		BOULDER SLOPE
■	DRYWELL		CHAIN LINK FENCE
			STOCKADE FENCE
			SIGN

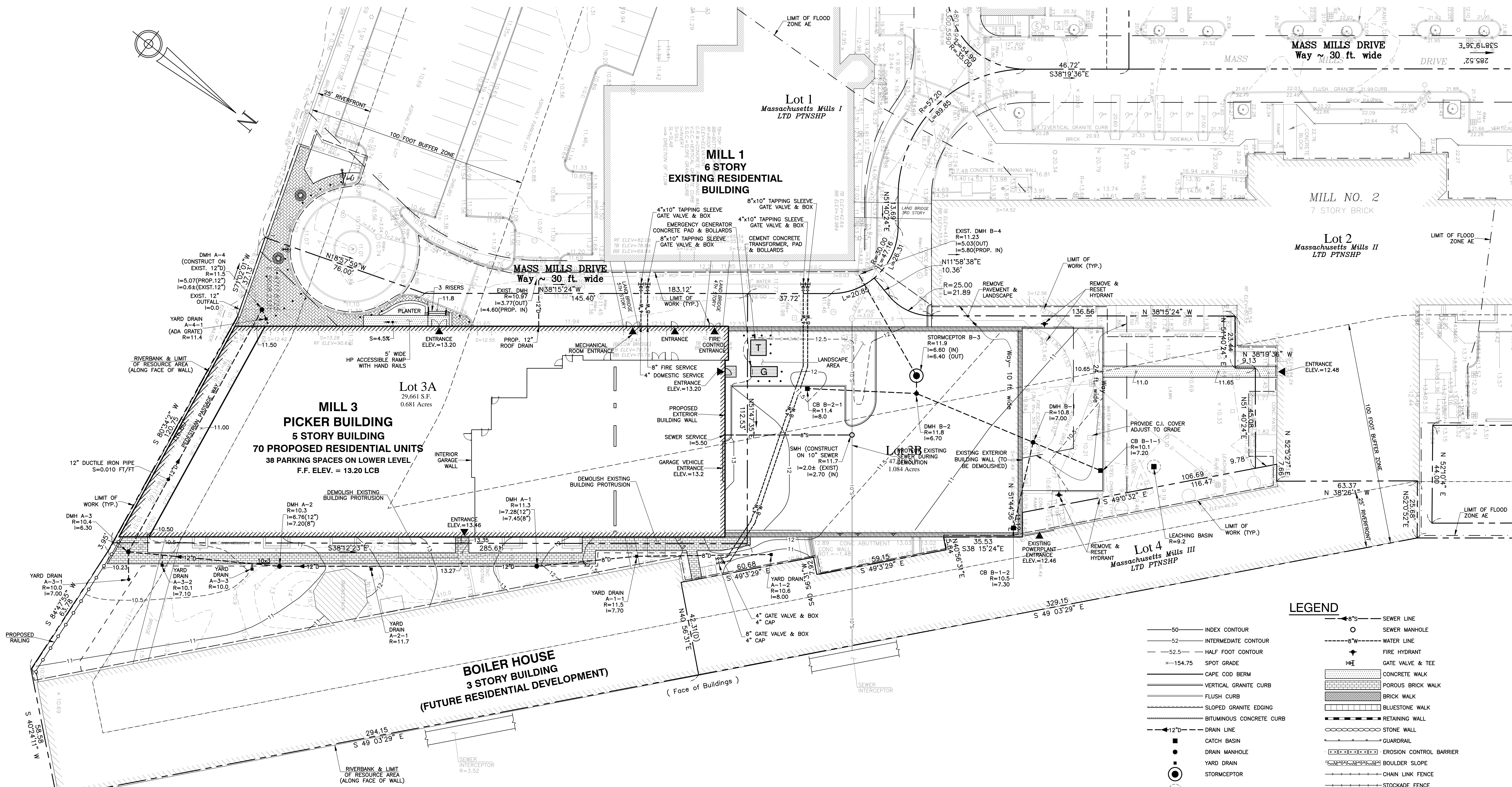


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R-M Developer LLC Massachusetts Mills III - PICKER BLDG Lowell, Massachusetts	<b>LAYOUT &amp; MATERIAL PLAN</b> Date: JULY 8, 2014 Rev: Scale: 1"=20'	<b>C-3</b>
Russell Scott Steedle & Capone Architects Inc. 18 Brattle Street Cambridge Massachusetts 02138 617-661-5880 Fax 661-0613		

3302-S8.dwg Saved: 7/8/2014 10:52 AM Plotted: Dec 10, 2014 2:46 pm

File Name: C:\3302-S8.dwg Saved: 7/8/2014 10:52 AM Plotted: Dec 10, 2014 2:46:13pm  
By: C:\3302-S8.dwg Plot: 3302-S8.dwg Plotted By: Allen Greenleaf



**LEGEND**

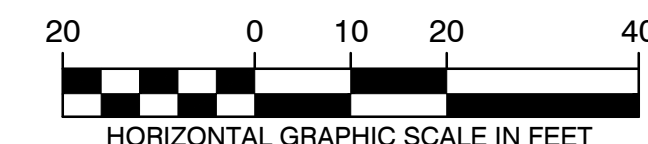
- 50 INDEX CONTOUR
- 52 INTERMEDIATE CONTOUR
- 52.5 HALF FOOT CONTOUR
- 154.75 SPOT GRADE
- CAPE COD BERM
- VERTICAL GRANITE CURB
- FLUSH CURB
- SLOPED GRANITE EDGING
- BITUMINOUS CONCRETE CURB
- 12" DRAIN LINE
- CATCH BASIN
- DRAIN MANHOLE
- SEWER MANHOLE
- WATER LINE
- FIRE HYDRANT
- GATE VALVE & TEE
- CONCRETE WALK
- POROUS BRICK WALK
- BRICK WALK
- BLUESTONE WALK
- RETAINING WALL
- STONE WALL
- GUARDRAIL
- EROSION CONTROL BARRIER
- BOULDER SLOPE
- CHAIN LINK FENCE
- STOCKADE FENCE
- SIGN

**NOTES:**

- THE CONTRACTOR SHALL GIVE TWENTY FOUR (24) HOUR NOTICE TO PERTINENT CITY DEPARTMENTS BEFORE COMMENCING ANY WORK IN THE FIELD.
- ALL SITE WORK AND MATERIALS SHALL CONFORM WITH THE CITY OF LOWELL BUILDING REQUIREMENTS.
- UNDERGROUND UTILITIES, AS SHOWN, WERE DERIVED FROM FIELD INVESTIGATION AND PLANS OF RECORD AND MAY NOT BE COMPLETE OR ACCURATE. CONTACT "DIG-SAFE" A MINIMUM OF 72 HOURS PRIOR TO COMMENCING SITE WORK.
- ALL DISTURBED AREAS, NOT OTHERWISE DESIGNATED, SHALL BE COVERED WITH 4" OF LOAM AND SEED.
- RIM ELEVATIONS OF DRAINAGE AND SANITARY SEWER MANHOLES ARE APPROXIMATE. FINAL ELEVATIONS ARE TO BE SET FLUSH. ADJUST ALL OTHER RIM ELEVATIONS OF EXISTING MANHOLES, WATER GATES, GAS GATES AND OTHER UTILITIES TO FINISH GRADE WITHIN LIMITS OF SITE WORK.
- THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE, FIRE ALARM AND OTHER PRIVATE UTILITIES BY THE RESPECTIVE UTILITY COMPANIES, AS REQUIRED.
- ALL EXTERIOR DRAIN PIPES SHALL BE CLASS III REINFORCED CONCRETE PIPE WITH RUBBER GASKET JOINTS OR PVC SCHEDULE 35.
- WATER LINES SHALL BE CEMENT UNED DUCTILE IRON CLASS 52. CONTRACTOR SHALL VERIFY SIZE OF EXISTING LINES.
- SEDIMENT TRACKED ONTO ADJACENT DRIVES SHALL BE SWEEPED AT THE CONCLUSION OF EACH CONSTRUCTION DAY.
- ANY AREAS OUTSIDE THE LIMIT OF WORK DISTURBED BY THE CONTRACTOR SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR IS RESPONSIBLE FOR THE IMPLEMENTATION AND COMPLIANCE WITH THE CONSERVATION COMMISSIONS ORDER OF CONDITIONS. A COPY OF THE ORDER MUST BE AT THE SITE AT ALL TIMES.
- SEWER PIPE SHALL BE PVC CONFORMING TO ASTM D 3034-SDR35. FITTINGS SHALL BE RUBBER RING CONFORMING TO ASTM D 3212.
- REFER TO LANDSCAPE PLANS FOR PAVING MATERIALS AND LAYOUT INFORMATION.

**PLAN REFERENCES:**

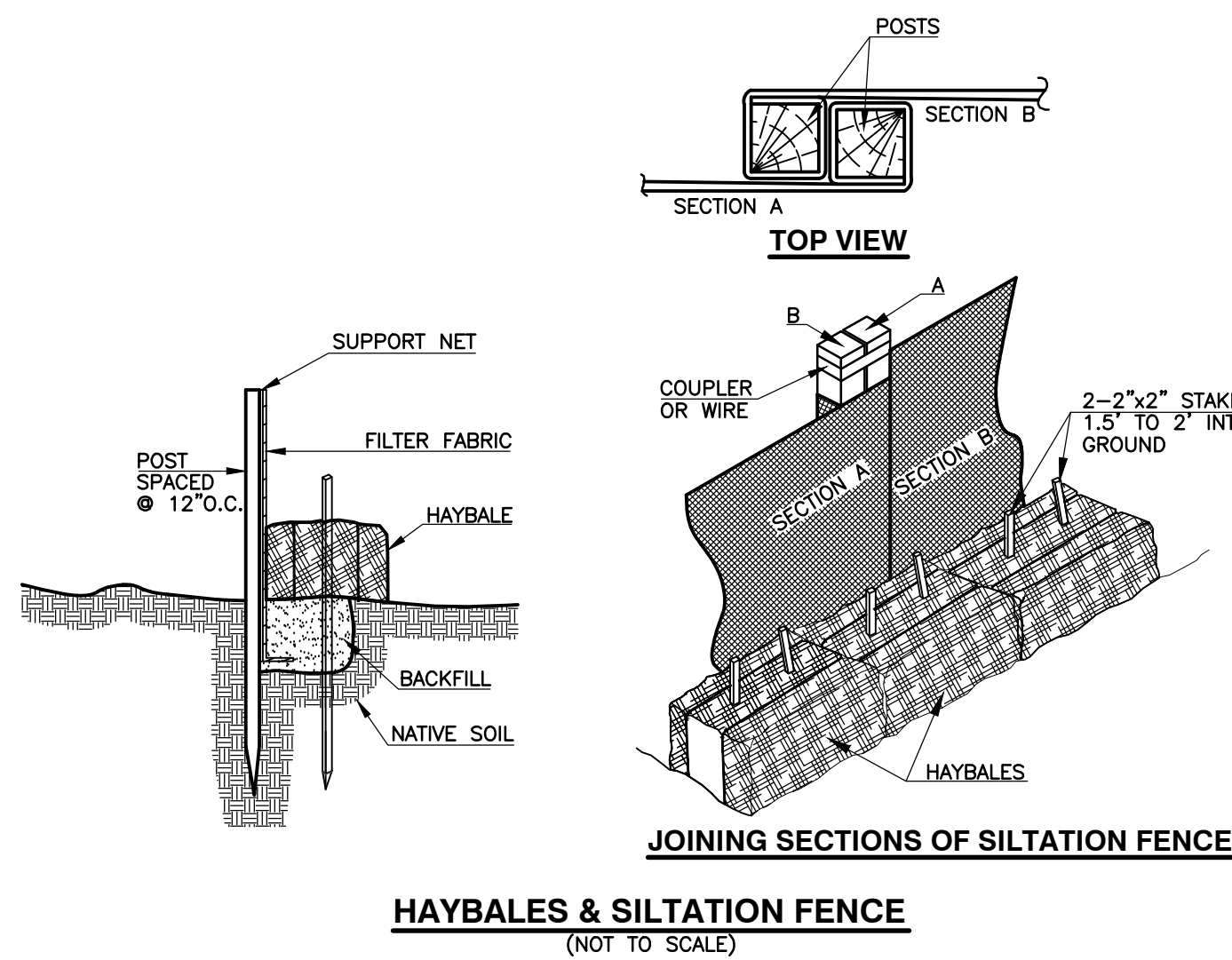
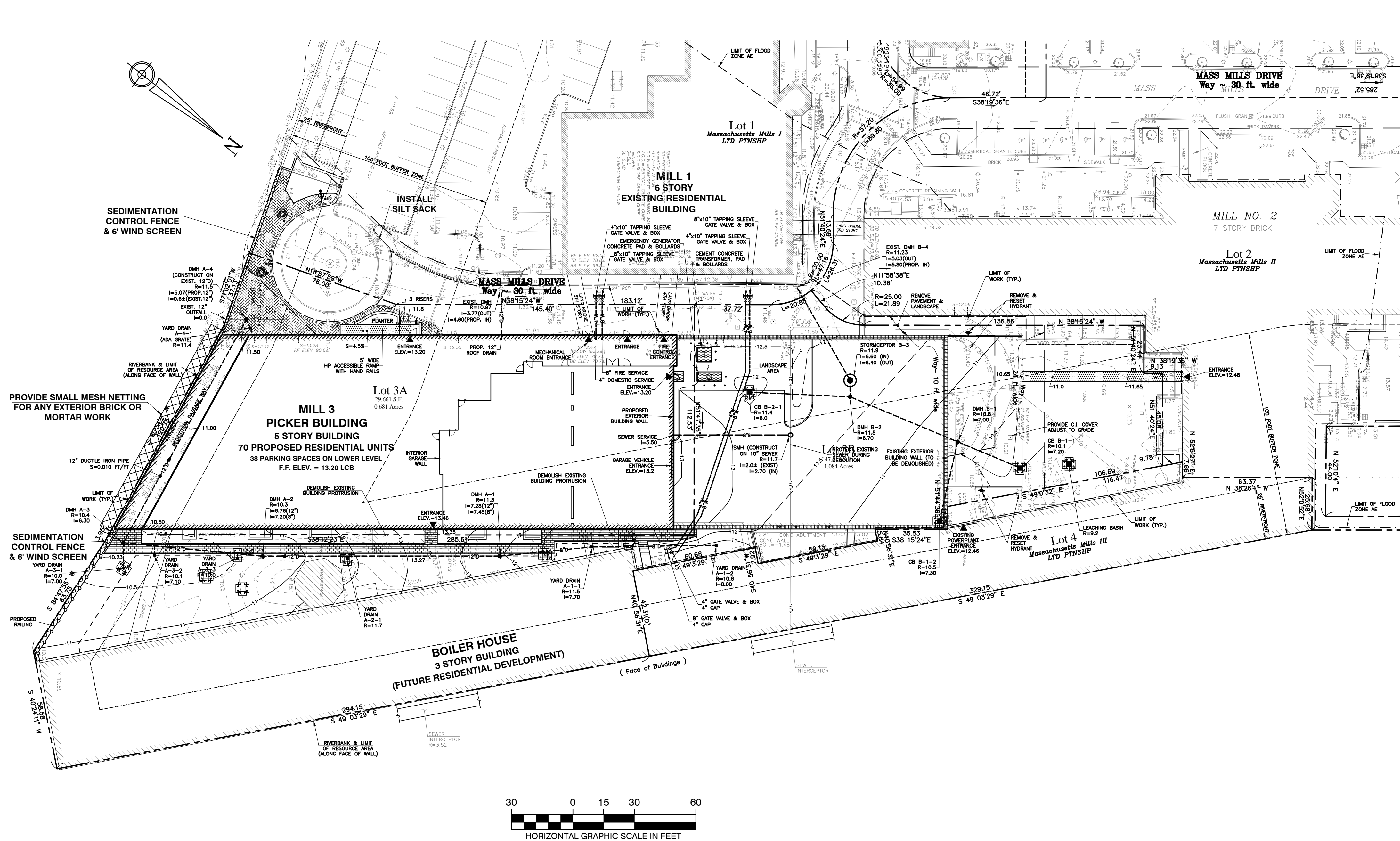
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- PROPERTY LINE TAKEN FROM A PLAN TITLED "PLAN OF LAND, MASSACHUSETTS MILLS, 169.2 BRIDGE STREET, LOWELL, MASSACHUSETTS", PLAN PREPARED BY R. E. CAMERON & ASSOCIATES, INC. OF NORWOOD, MA AND DATED APRIL 22, 2014.



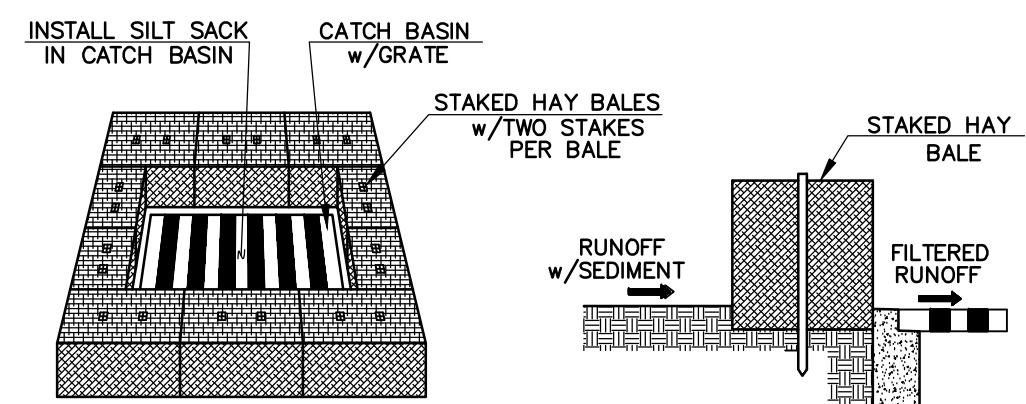
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R-M Developer LLC Massachusetts Mills III - PICKER BLDG Lowell, Massachusetts	GRADING & UTILITY PLAN
Russell Scott Steedle & Capone Architects Inc. 18 Brattle Street Cambridge Massachusetts 02138 617-661-5880 Fax 661-0613	Date: JULY 8, 2014 Rev: Scale: 1"=20'

**C-4**



HAYBALES & SILTATION FENCE  
(NOT TO SCALE)



NOTES:

1. SILT SACK SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION, AND SHALL BE REMOVED AFTER SITE HAS STABILIZED.
2. HAY BALES SHALL BE REMOVED AFTER BITUMINOUS PAVEMENT HAS BEEN PLACED, IF SITE CONDITIONS WARRANT, AS DETERMINED BY ENGINEER. THEY SHALL BE REPLACED AFTER PAVING AND MAINTAINED UNTIL SITE HAS STABILIZED.

HAY BALE CATCH BASIN PROTECTION  
(NOT TO SCALE)

EROSION CONTROL REQUIREMENTS  
OPERATION & MAINTENANCE PLAN  
MASSACHUSETTS MILLS  
LOWELL, MA

January 19, 2004

INTRODUCTION

The proposed project site is located on Lot #3 within the 7.5 acre Massachusetts Mills complex situated south of Bridge Street in Lowell, MA (Middlesex County). The Massachusetts Mills complex is bordered by Bridge and Canal Streets to the north, the Merrimack River to the east, the Concord River to the south and Merrimack Street to the west. The Massachusetts Mills complex was a former mill operation that now contains residential apartment buildings while the surrounding area includes a mixture of commercial and residential developments.

Lot #3 is a 1.65 acre parcel located along the southeast corner of the Massachusetts Mills site at the confluence of the Merrimack and Concord Rivers. This lot is currently developed with two existing buildings (Mill Building 3 and the Boiler House building) along with additional bituminous parking and degraded areas. The Boiler House building abuts against the existing power plant building, which in turn abuts against Mill Building 2, forming a contiguous section of bank along the Merrimack River. Mill Building 3 is located west of the Boiler House building and forms a section of bank along the Concord River.

The proposed project includes the redevelopment of Mill Building 3 into residential apartments along with the construction of an associated access drive, parking, walkways, utilities and stormwater management system. Approximately 20 percent of the northern end of Mill Building 3 will be demolished and replaced with a bituminous driveway access to the proposed basement level parking area. A pedestrian walkway will extend from the present courtyard area between Mill Building 2 and Mill Building 3 to the end of Mill Building 3 at the Concord River. This walkway will provide pedestrian access to the Boiler House Building. The walkway will then extend westerly through the southern end of Mill Building 3 along the Concord River and connect to the existing walkway located 80 feet west of the building.

The proposed project includes work that comes under the jurisdiction of the Lowell Conservation Commission. It is anticipated that the Commission will issue an Order of Conditions, a copy of which the contractor must retain on site, and must comply with all conditions stated therein. The purpose of the Orders is to minimize the potential of siltation of the wetlands from both overland flow and from pipe flow, and to minimize the impact on the buffer zone adjacent to the wetlands. The following notes and details are intended to be a minimum set of guidelines, and the contractor shall be responsible for their implementation. Should additional control be required, the contractor shall take whatever steps are necessary.

The existing site features riverfront area along the southern and eastern borders at the confluence of the Concord and Merrimack Rivers. The two existing site buildings occupy almost all of the 25-ft riverfront area on Lot #3. The remaining riverfront area within Lot #3 is entirely altered and includes degraded areas.

The Interim Soils Map for Dracut/Lowell (1989) provided by the USDA Natural Resources Conservation Service (NRCS) identifies the on-site soils as Urban Land (map code 200). An urban land designation describes soils that have been so altered by historic development that they can no longer be classified.

SILTATION CONTROLS

The first phase of construction will consist of the placement of siltation controls in accordance with the detail and at the location indicated on the plans. No further construction activity will take place until the siltation controls are inspected and approved. No encroachment or alteration shall occur beyond the erosion control barriers. Erosion control barriers shall be maintained and

replaced, if necessary, throughout the course of construction.

SITE CONSTRUCTION

All unvegetated areas, including stockpiles, that will remain unvegetated for greater than 21 days should be mulched or seeded within 7 days of their grading. The perimeter sedimentation controls at the stockpiles should be in place at the end of each day and before rain events.

During the construction of the drainage system, care must be taken to prevent siltation from entering the system. Drainage pipes in open excavations shall not remain open overnight. Hay bales shall be staked around the catch basins and/or a woven geotextile material shall be placed in the catch basins until the binder course has been placed. The silt and sand, which may accumulate around the catch basins, shall be removed after every rainstorm.

Small mesh netting shall be installed along the riverfront side of the buildings if any exterior brick or mortar work is proceeding. The purpose of the netting is to prevent debris from falling into the river. Immediately after the exterior work is completed, the netting shall be carefully removed, and the debris properly disposed of.

Catch basins shall be set to binder grade until immediately prior to placement of the top course, at which time they will be set at final grade. The drainage system shall be cleaned prior to acceptance.

Work shall commence as soon as practical on the perimeter disturbed areas not to be paved. Four inches (4") of topsoil is to be placed in these areas and the areas hydroseeded. All areas shall be stabilized within sixty (60) days of disturbance. When weather conditions do not permit stabilization by seeding, hay mulch, straw mats, jute netting or other approved means shall be used for temporary stabilization.

INSPECTION AND MAINTENANCE

Prior to construction, the Contractor shall formulate a schedule for inspection and maintenance of the erosion control measures. This schedule shall establish, at a minimum, the weekly inspections of the sedimentation controls, stockpiles, catch basins, unstabilized areas within the site and a report of any required maintenance. The schedule will also appoint an individual who will be responsible for performing the weekly inspections.

During the weekly inspection, and at any time during the course of construction, the Engineer, the Conservation Commission Agent, the Owner or the individual responsible for the individual control measures may direct the Contractor to take immediate action to correct a deficiency or to increase the erosion control measures.

ADDITIONAL REQUIREMENTS

The contractor shall employ measures to control dust during construction. All debris shall be properly contained and disposed of.

The Massachusetts Mills parking and roadway areas and shall be swept clean of any soils tracked onto the pavement from vehicles exiting the site.

A supply of hay bales and siltation fence shall be kept on site to provide for additional siltation control, as may be required. Any construction equipment observed leaking or dripping oil shall be removed from the site. No construction equipment shall be re-fueled within 200 feet of the resource area.

The above requirements are intended to be a minimum set of guidelines. The contractor shall be responsible for their implementation. Should additional controls be required, the contractor shall take whatever steps are necessary.

Temporary grass stabilization shall be applied at rate of 4-pounds/1,000 sf, and conform to the specifications outlined in Table 1.

Table 1  
Seed Mixture

SEED	% WEIGHT
Winter Rye	80.0 Min.
Red Fescue (Creeping)	4.0 Min.
Perennial Rye Grass	3.0 Min.
Red Clover	3.0 Min.
Other Crop Grass	0.5 Min.
Noxious Weed Seed	0.5 Max.
Inert Matter	1.0 Max.

CONSTRUCTION SCHEDULE

- A. Prior to construction, sediment control fence shall be installed as indicated on the plan, and silt sacks shall be installed in the existing catch basins.
- B. The site utility work building renovation and site improvement work is to commence.
- C. Small mesh netting is to be installed prior to commencing any exterior brick and mortar work on river sides of the building.
- D. Additional siltation fence or hay bales will be added as construction proceeds where required to control erosion. Sedimentation controls shall be installed along the downhill side of all soil stockpiles.
- E. Catch basins shall have either staked haybales placed around the grate or have a geotextile bag installed until the parking area is paved.
- F. The pavement subgrade will then be graded, and the gravel and the bituminous base course placed. This shall be completed as soon as practical after the site clearing.
- G. All disturbed areas not already stabilized will then be spread with the required a minimum of 4 inches of topsoil and seeded.
- H. The drainage system shall be completely operational prior to any paving.
- I. The building roof drains will be in operation immediately after the roof is completed.
- J. All drainage structures will be cleaned upon completion of construction.
- K. The siltation controls shall be removed after the site has stabilized and permission is given by the Lowell Conservation Commission.

BMP MAINTENANCE SCHEDULE FOR CONSTRUCTED SITE

1. Inspect catch basins and Stormceptor Treatment Chambers quarterly if all tributary areas are stabilized with vegetation or monthly if not. Clean out if more than 1/4 full of sediment (1 foot deep in a 4-foot sump). Inspect and clean as necessary after intense rainfall and as soon as practical after winter sanding.

2. Keep all previous site areas stabilized at all times. Keep any stockpiled earth covered. Remove leaves and trimmings from site.
3. Sweep parking areas and access drives with vacuum sweeper four (4) times annually, once after winter sanding, a second time during the early spring, a third time during the summer and a fourth time during the fall after the foliage has fallen.
4. Stormceptor Recommended Maintenance Procedure  
Oil is removed through the 6" inspection/cleanout pipe and sediment is removed through the 24" diameter outlet riser pipe. Alternatively, oil could be removed from the 24" opening if water is removed from the treatment chamber, lowering the oil level below the drop pipes.

The depth of sediment can be measured from the surface of the Stormceptor with a dipstick tube equipped with a ball valve (Sludge Judge). Rinker Materials recommends maintenance be performed once the sediment depth exceeds approximately 8 inches in Model STC 900.

No entry into the unit is required for routine maintenance of the Inlet Stormceptor or the smaller disc insert models of the In-Line Stormceptor. Entry to the level of the by-pass may be required for the servicing of the larger in-line models. Any potential obstructions at the inlet can be observed from the surface. The by-pass chamber has been designed as a platform for authorized maintenance personnel, in the event that an obstruction needs to be removed, drain flushing needs to be performed, or camera surveys are required.